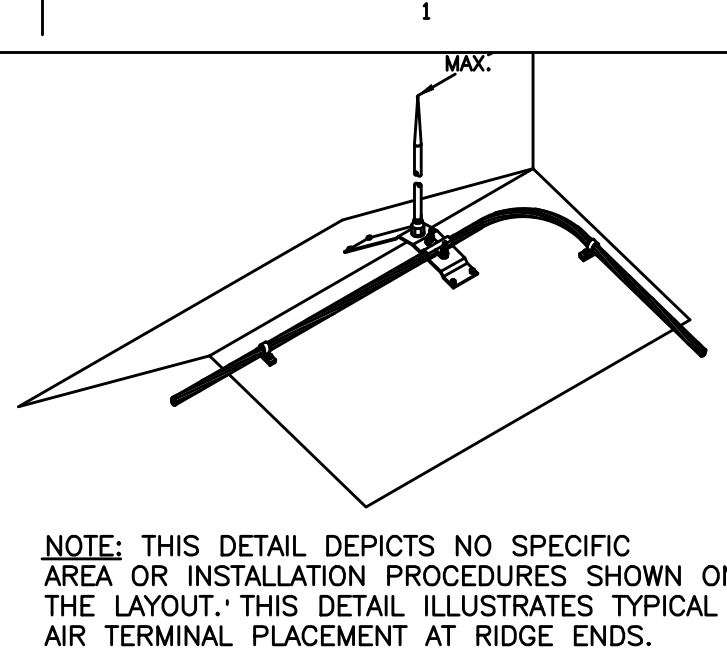
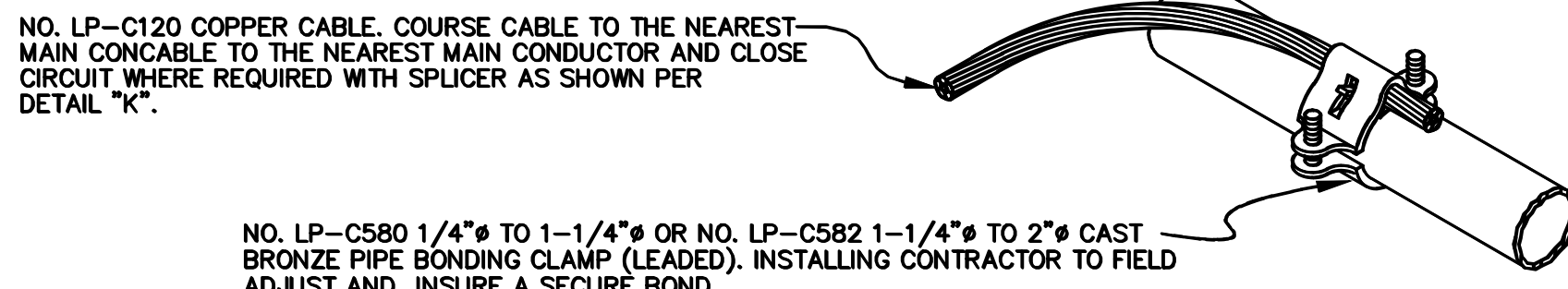


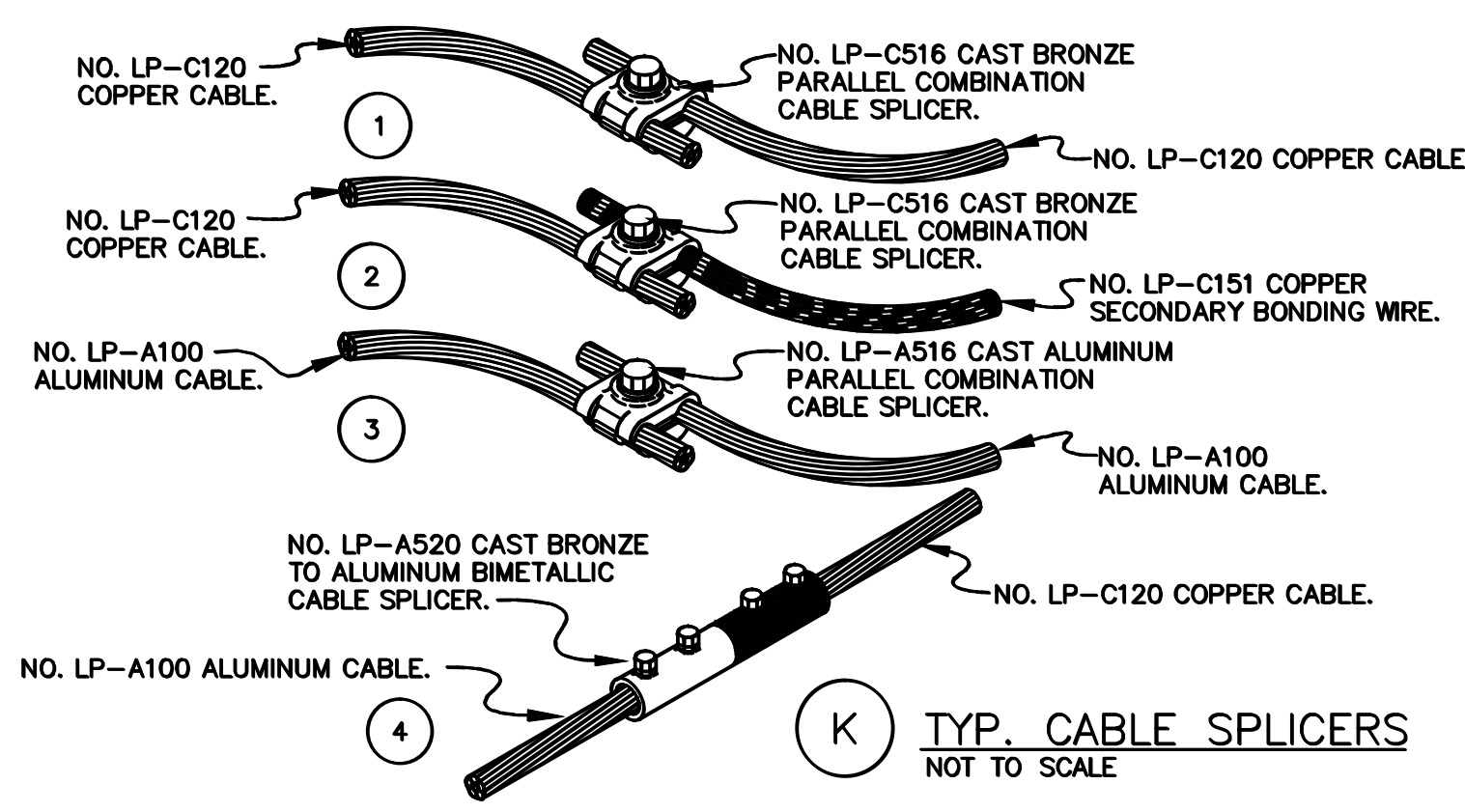
three inches = one foot  
one and one-half inches = one foot  
one inch = one foot  
three-quarters inch = one foot  
one-half inch = one foot  
three-eighths inch = one foot  
one-quarter inch = one foot  
one-eighth inch = one foot



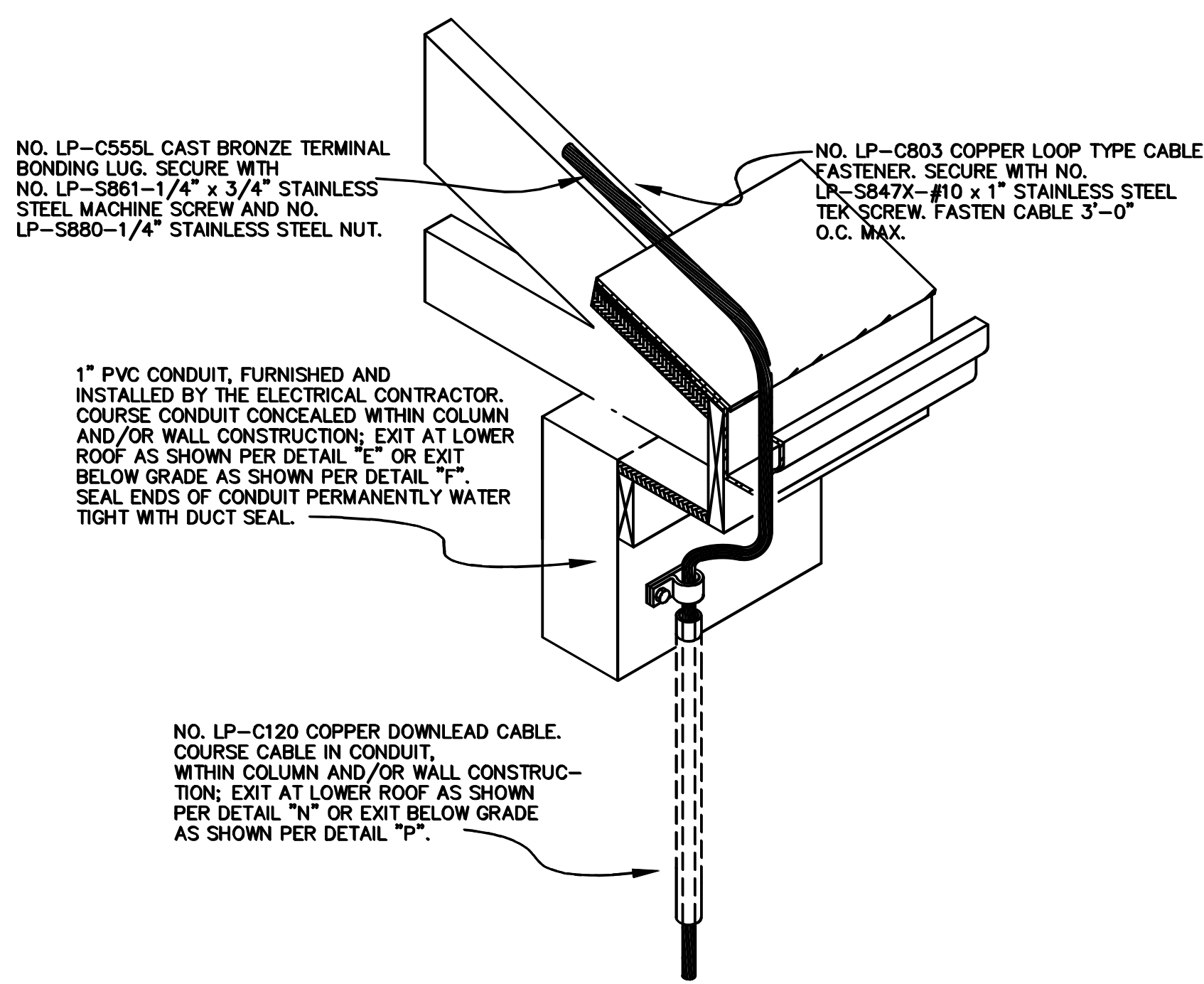
A TYP. AIR TERMINAL PLACEMENT AT RIDGE ENDS NOT TO SCALE



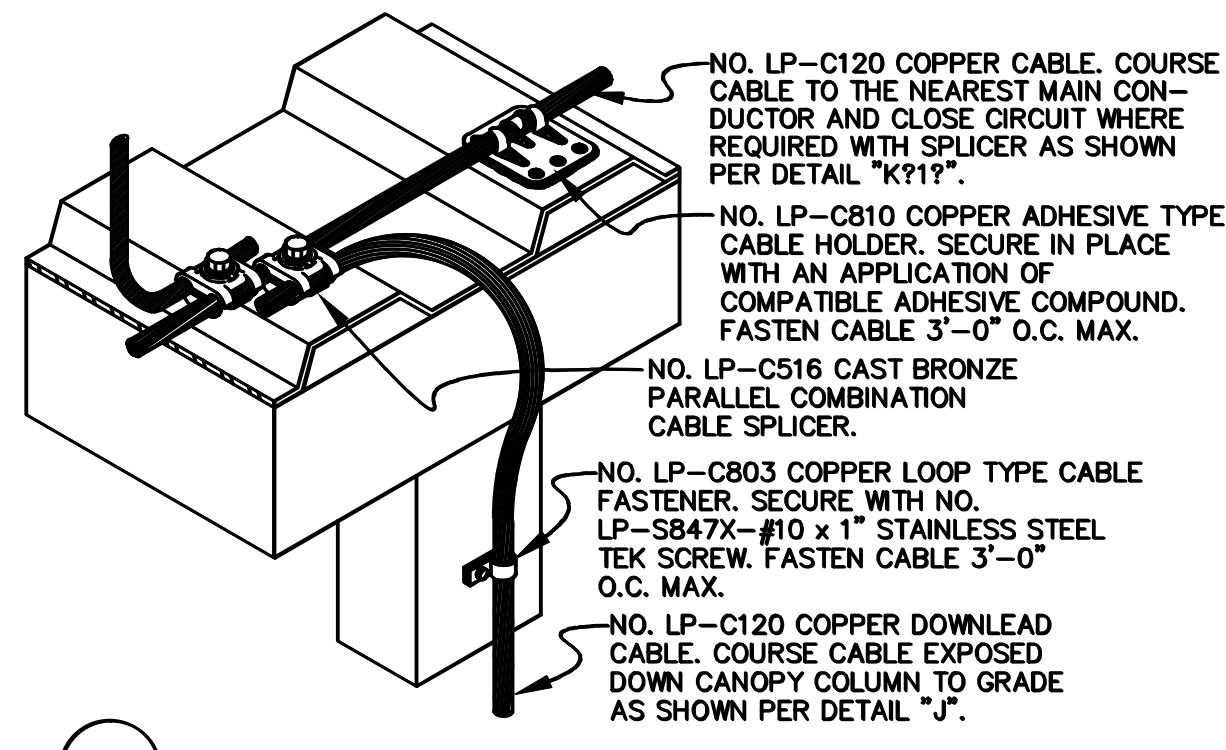
J TYP. PIPE BONDING CLAMP NOT TO SCALE



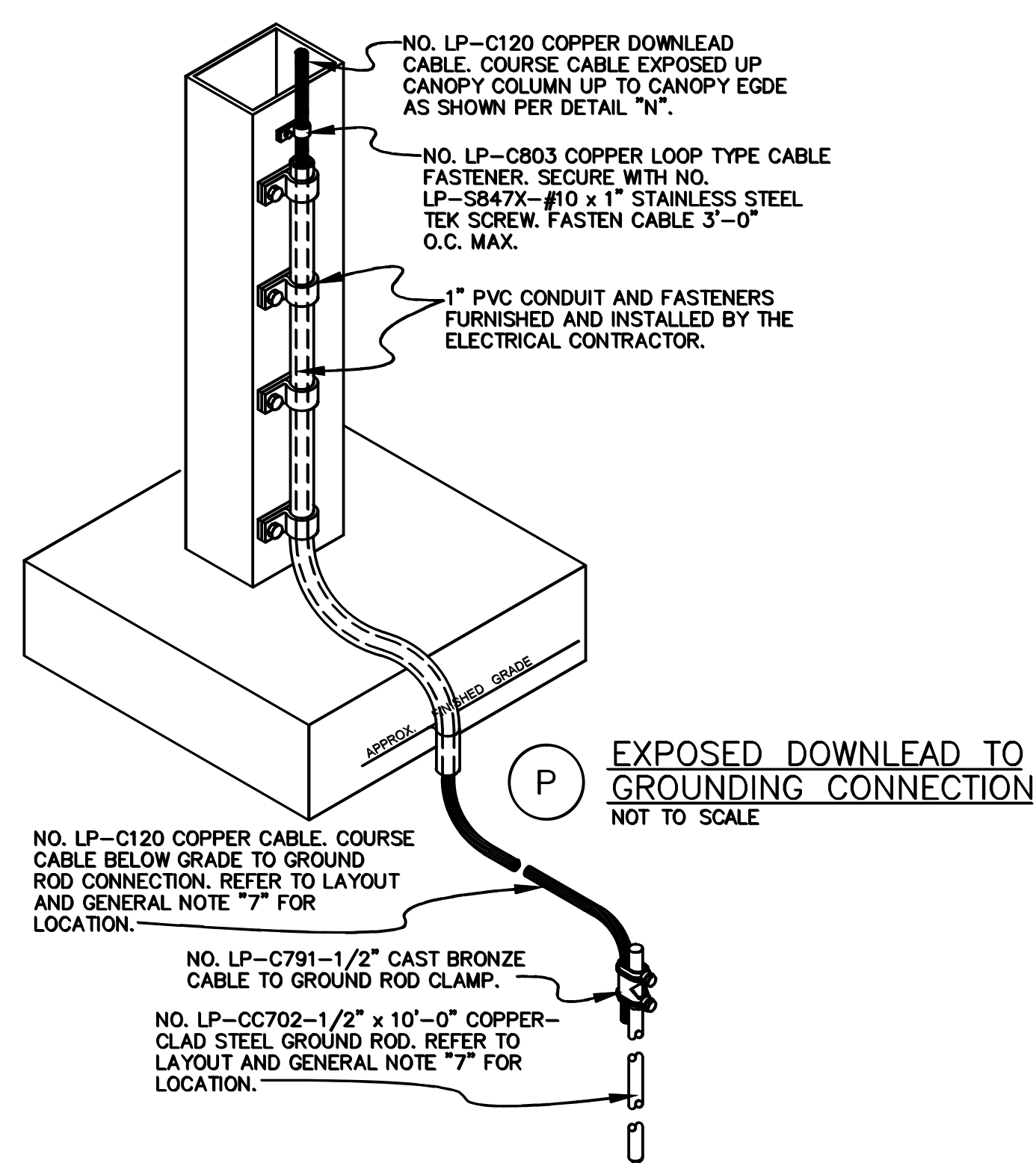
K TYP. CABLE SPICERS NOT TO SCALE



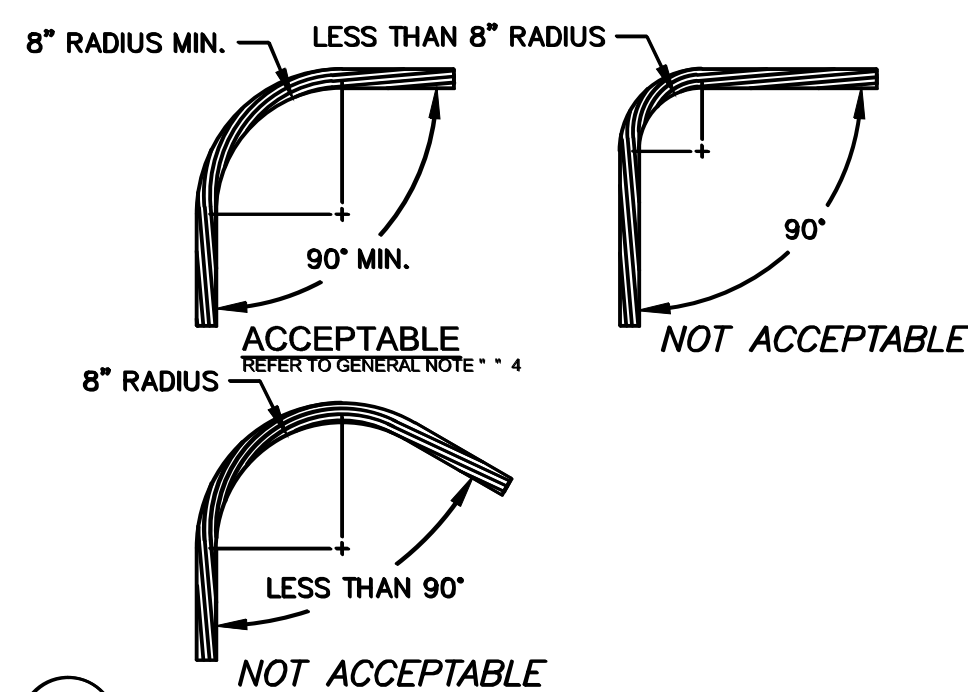
M EXPOSED DOWNLEAD AT EAVE NOT TO SCALE



N EXPOSED DOWNLEAD AT CANOPY EDGE NOT TO SCALE



P EXPOSED DOWNLEAD TO GROUNDING CONNECTION NOT TO SCALE



Q TYP. CABLE BEND REQUIREMENTS NOT TO SCALE

## GENERAL INSTALLATION NOTES

- 1 METAL BODIES OF INDUCTANCE LOCATED ABOUT THE ROOF SUCH AS; METAL FLASHING, GRAVEL STOPS, ROOF DRAINS, SOIL PIPE VENTS, INSULATION VENTS, LOUVERS AND DOOR FRAMES SITUATED WITHIN 6'-0" OF A LIGHTNING CONDUCTOR OR BONDED METAL BODY SHALL BE INTERCONNECTED TO THE LIGHTNING CONDUCTOR SYSTEM.
- 2 NO BEND OF A CONDUCTOR SHALL FORM A FINAL INCLUDED ANGLE OF LESS THAN 90° NOR SHALL HAVE A RADIUS OF BEND OF LESS THAN 8".
- 3 CONDUCTORS SHALL INTERCONNECT ALL AIR TERMINALS AND SHALL FORM A TWO-WAY PATH FROM EACH AIR TERMINAL HORIZONTALLY OR DOWNWARD TO CONNECTIONS WITH GROUND TERMINALS.
- 4 ALL LIGHTNING PROTECTION CONDUCTORS SHALL BE FASTENED NOT MORE THAN 3'-0" MAXIMUM SPACING.
- 5 GROUND RODS SHALL BE DRIVEN TO A MINIMUM DEPTH OF 10'-0" BELOW GRADE AND 2'-0" AWAY FROM FOUNDATION WALL.
- 6 CONNECTIONS TO GROUND LOOP CONDUCTOR SHALL BE MADE AT A POINT NOT LESS THAN 18" BELOW GRADE AND 2'-0" AWAY FROM FOUNDATION WALL.
- 7 AIR TERMINALS SHALL BE PLACED AT ALL UNPROTECTED OUTSIDE CORNERS AND LOCATED INTERMEDIATELY ON 20'-0" MAXIMUM SPACING AROUND THE ROOF PERIMETER OR RIDGE AND WITHIN 2'-0" OF OUTSIDE EDGE.
- 8 FOR SAKE OF CLARITY, WE HAVE NOT LABELED EACH INDIVIDUAL ITEM OF LIGHTNING PROTECTION MATERIALS ON THE ROOF PLAN. WE HAVE SHOWN INSTALLATION DETAILS AND HAVE CALLED OUT EACH OF THESE DETAILS ON THE ROOF PLAN ONLY AT RANDOM LOCATIONS.
- 9 BOND ALL METALLIC PIPES INCLUDING WATER, FIRE, GAS, SEWER, STORM, ETC. WHICH ENTER THE STRUCTURE TO THE NEAREST DOWNLEAD, GROUND ROD OR GROUND LOOP.
- 10 BARE COPPER LIGHTNING PROTECTION MATERIALS SHALL NOT BE INSTALLED ON ALUMINUM ROOF OR SIDING OR OTHER ALUMINUM SURFACES AND VICE VERSA, ALUMINUM LIGHTNING PROTECTION MATERIALS SHALL NOT BE INSTALLED ON COPPER ROOFING OR COPPER SIDING OR OTHER COPPER SURFACES.
- 11 THE LIGHTNING PROTECTION SYSTEM SHALL BE INSTALLED IN A NEAT AND INCONSPICUOUS MANNER SO THAT ALL COMPONENTS WILL BLEND IN WITH THE APPEARANCE OF THE BUILDING.
- 12 ACTUAL JOB-SITE CONDITIONS MAY NECESSITATE SLIGHT ALTERATIONS IN AIR TERMINAL AND GROUND ROD LOCATIONS.
- 13 MIDROOF AIR TERMINALS SHALL BE PLACED ON 50'-0" MAXIMUM SPACING.
- 14 THE LIGHTNING PROTECTION INSTALLATION SHALL COMPLY IN ALL RESPECTS TO LIGHTNING PROTECTION INSTITUTE STANDARD 175. THE INSTALLATION SHALL BE MADE BY OR UNDER THE SUPERVISION OF AN L.P.I. CERTIFIED MASTER INSTALLER. THE COMPLETED INSTALLATION SHALL RECEIVE SYSTEM CERTIFICATION SUBMITTAL FORM LPI 176.
- 15 BOND ALL EXHAUST FAN, MISC. MECHANICAL, AND PLUMBING EQUIPMENT, VENTS, ETC. ON ROOF.

## LEGEND

●	AIR TERMINAL LOCATION
□	THRU-ROOF LOCATION
€	THRU-WALL LOCATION
⎓	GROUND ROD LOCATION
— — —	NO. LP-C120 COPPER CABLE, U.L. LABELED, 29 ST., 17 GA., 192 LBS./1,000 FT., 59,450 CM. (#2 AWG).
.....	NO. LP-C120 COPPER CABLE, U.L. LABELED, SAME SPECS AS ABOVE. COURSE CABLE CONCEALED FROM VIEW SHOWN.
~~~~~	NO. LP-C151 COPPER SECONDARY BONDING WIRE, 80 LBS./1,000 FT., 26,240 CM. (#6 AWG).
⊗	ROOF DRAIN
⊙	OVERFLOW DRAIN
⊗	EXHAUST FAN
□	MISC. MECHANICAL EQUIPMENT
○	VENT THRU ROOF

Revisions	Date

**BIRCHFIELD  
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ASSOCIATES,  
ARCHITECTS**

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Replace Shingles - Building 39 - 40  
Department of Veterans Affairs  
**MEDICAL CENTER**  
**TUSCALOOSA, ALABAMA**

Drawing Title	DETAILS
Approved: Chief Engineer	

Project Title	REPLACE SHINGLES - BUILDINGS 39 & 40 DEPARTMENT OF VETERANS AFFAIRS
Building Numbers	39 & 40
Checked	JUS
Drawn	DB
Location	VA MEDICAL CENTER TUSCALOOSA, ALABAMA

Date	06-04-2010
Project Number	679-10-103
Drawing No	E1.0
Dwg	8 of 10

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PROJECT: 09-97

**Veterans  
Administration**